

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A system comprising:
a first computer system associated with a primary provider and a second computer system associated with a secondary provider, wherein the first computer system and the second computer system are operably coupled to a first network providing for an exchange of information, the information pertaining to a semiconductor-related product;
wherein the first computer system performs:
 assigning a predetermined event element to the semiconductor-related product at the secondary provider, wherein the predetermined event element is a product-specific process parameter;
 collecting the exchanged information;
 collecting event information upon an occurrence of a predetermined event element associated with the semiconductor-related product; and
 providing the collected exchanged information and the collected event information to a customer associated with the semiconductor-related product, wherein the event information includes an abnormality alert.
2. (Canceled)
3. (Previously Presented) The system of claim 1 wherein the first and second computer systems are operably coupled by a first network for exchanging information between the primary and secondary providers, and the providing the collected exchanged information and the collected event information uses a second network, different from the first network.
4. (Previously Presented) The system of claim 3 wherein the exchange of information-uses a dedicated bi-directional path of the first network, and wherein the collecting the exchanged information provides continuously collecting the exchanged information.

5. (Previously Presented) The system of claim 1, further comprising an enterprise control system that includes a customer interface in the form of a web browser, wherein the enterprise control system receives the collected exchanged information and the collected event information from the first computer system.

6. (Previously Presented) A method of business-to-business exchange between providers in a semiconductor manufacturing environment, the method comprising:

exchanging a product from a primary provider to a secondary provider, wherein the primary provider is a semiconductor fab and the product is a lot of semiconductor wafers;

assigning event elements to the product, wherein the event elements include a plurality of process steps performed by the secondary provider wherein the event elements are stored in a memory unit, and wherein the assigning event elements to the product includes the secondary provider defining a first event element using a first computer system associated with the secondary provider and the primary provider modifying the first event element using a second computer system associated with the primary provider, wherein the first event element is a product-specific process parameter;

transmitting information associated with the product throughout a virtual fab, wherein the transmission of information occurs continuously and multi-directionally between the providers through the virtual fab, and wherein the information is associated with the assigned event elements, and wherein the information includes a time of an event element and a quantity of the product yielded, and wherein the virtual fab includes the first computer system and the second computer system operably coupled to a network, and wherein the transmitting information includes the primary provider transmitting a second event element to the secondary provider based on the received information, wherein the second event element is a product-specific process parameter of a process performed by the secondary provider;

storing at least a portion of the transmitted information in the memory unit; and

providing the portion of the transmitted information to a third computer system associated with a customer in response to a customer request using the network, wherein the transmitted information includes an abnormality alert.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The method of claim 6 wherein the event elements include a second event element including a process completion at a predetermined check point.

10. (Previously Presented) The method of claim 6 wherein the event elements of the primary provider and the secondary provider comprise product process steps, the event elements track the product through the virtual fab.

11. (Previously Presented) The method of claim 6 wherein the information includes product lot identification and product lot history.

12. (Previously Presented) The method of claim 6, wherein the step of providing uses a service system interface for communicating between a computer system associated with the customer and a computer system associated with the semiconductor fab.

13. (Canceled)

14. (Previously Presented) The method of claim 6 wherein the primary provider is a semiconductor fab facility.

15. (Previously Presented) The method of claim 6 wherein the secondary provider is a sub-contractor.

16. (Previously Presented) The method of claim 6 wherein the primary provider is a semiconductor design house.

17. (Previously Presented) The method of claim 6 wherein the secondary provider is a equipment vendor.

18. (Previously Presented) The method of claim 6 wherein the event elements of the primary provider and secondary provider comprise product process steps to occur at the secondary provider, the event elements track the product through the virtual fab.

19. (Previously Presented) The method of claim 18 wherein the event elements include manufacturing process checkpoints.

20. (Canceled)

21. (Previously Presented) A computer readable medium including computer-readable instructions for tracking and managing a plurality of product and information through a semiconductor manufacturing environment, the computer-readable instructions, comprising:

instructions for establishing a virtual fab with a plurality of entities, each entity associated with an internal process to a semiconductor fab or an external process to the semiconductor fab and wherein at least one of the plurality of entities is associated with an internal process and at least one of the entities is associated with an external process;

instructions for assigning a plurality of event elements for tracking the product through the plurality of entities of the virtual fab, wherein a plurality of event elements are provided for each of the plurality of entities of the virtual fab, and wherein the plurality of event elements include at least one process-specific product parameter and at least one abnormality alert;

instructions for a communications interface for interacting with a enterprise control entity and the plurality of event elements;

instructions for controlling the product quality, wherein the product quality may be controlled by at least two of the plurality of entities;

instructions for determining a future location for the product and the associated information through the virtual fab via the enterprise control entity; and

instructions for amending the associated information to the recordable medium through the virtual fab.

22. (Previously Presented) The computer-readable medium of claim 21 wherein the plurality of entities include:

at least one entity associated with a primary provider manufacturing executing system in the virtual fab;

at least one entity associated with a secondary provider manufacturing executing system in the virtual fab;

at least one entity associated with a manufacturer of the semiconductor equipment vendor;

at least one entity associated with a manufacturer of the sub-contractor;

at least one entity associated with a manufacturer of the semiconductor design house;

at least one entity associated with a customer of products being manufactured by the semiconductor fab; and

at least one entity associated with engineering support for the either or both of the primary and second manufacturing executing system.

23. (Canceled)

24. (Previously Presented) The method of claim 6, further comprising:

the primary provider performing quality control function at the secondary provider using the information received.